

Docket No: 19789-8

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Stephanie Berlepsch
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PATENT

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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Applicant: Wim J. van Ooij, et al.

Serial No.: 10/031,731

Group Art Unit:

Filed: January 22, 2002

Examiner:

For: **Acyloxy Silane Treatments for Metals**

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
Washington, DC 20231

Dear Sir:

In accordance with 37 C.F.R. §§ 1.97 and 1.98 Applicant herewith submits certain patent references which the Patent & Trademark Office may wish to consider in examining the above-identified application. The references are listed on the attached Form PTO-1449.

An English language abstract is provided for each reference which is not in English.

Copies of the listed references are also provided. No representation is made or intended that a prior art search has been made or that no better art than that listed is available.

Please charge any fees required, or credit any overpayment, to Deposit Account No. 04-1133.

Respectfully submitted,

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PTO FORM 4/92

FORM PTO-1449

LIST OF PATENTS AND PUBLICATIONS
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Exam. Init.	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS
	2 7 5 1 3 1 4	11/03/54	Keil		
	3 0 2 2 1 9 6	12/04/57	Jenkins et al.		
	3 2 4 6 6 7 1	04/19/66	Stein et al.		
	3 4 7 6 8 2 6	11/04/69	Millen		
	3 8 1 6 1 5 2	06/11/74	Yates		
	3 8 4 2 1 1 1	10/15/74	Meyer-Simon et al.		
	3 8 7 3 3 3 4	03/25/75	Lee et al.		
	3 8 7 9 2 0 6	04/22/75	Nestler et al.		
	3 9 6 0 8 0 0	06/01/76	Kohl, Jr.		
	4 0 0 0 3 4 7	12/28/76	Ranney et al.		
	4 0 1 5 0 4 4	03/29/77	Ranney et al.		
	4 0 5 9 4 7 3	11/22/77	Okami		
	4 0 6 4 3 1 3	12/20/77	Takiguchi et al.		
	4 1 5 1 1 5 7	04/24/79	Williams et al.		
	4 1 5 2 3 4 7	05/01/79	Pletka et al.		
	4 1 7 9 5 3 7	12/18/79	Rykowski		

FOREIGN PATENT DOCUMENTS

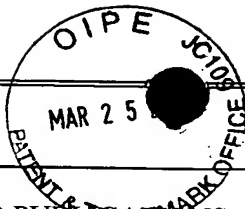
DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS
2 1 1 0 4 6 1	07/26/94	Canada		
0 4 3 5 7 8 1 A2	07/03/91	EPO		
0 5 3 3 6 0 6 A1	03/24/93	EPO		
0 5 7 9 2 5 3 B1	0/19/94	EPO		

OTHER ART (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

✓	Buchwalter, L.P., et al. Adhesion of polyimides to ceramics: Effects of aminopropyltriethoxysilane and temperature and humidity exposure on adhesion, <i>J. Adhesions Sci. Technol.</i> , Vol. 5, No. 4, pp. 333-343 (1991)
✓	Cruse, R. W., et al., Effect of Polysulfidic Silane Sulfur on Rolling Resistance, <i>Rubber & Plastic News</i> , pp. 14-17 (April 21, 1997)
✓	Henriksen, P.N., et al. Inelastic electron tunneling spectroscopic studies of alkoxysilanes adsorbed on alumina, <i>J. Adhesion Sci. Technol.</i> , Vol. 5, No. 4, pp.321-331 (1991)
✓	Hornstrom, S.E., et al., Paint Adhesion and Corrosion Performance of Chromium-Free Pretreatment of 55% Al-Zn-coated Steel, <i>J. Adhesion Sci. Technol.</i> Vol. 10, No. 9, pps. 883-904 (1996)
✓	Hornstrom, S.E., et al., Characterization of Thin Films of Organofunctional and Non-Functional Silanes on 55Al-43, 4Zn-1.6Si Alloy Coated Steel, <i>ECASIA 97</i> , pp. 987-990 (1997) -

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Exam. Init.	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS
	4 2 1 0 4 5 9	07/01/80	Williams et al.		
	4 2 3 1 9 1 0	11/04/80	Plueddemann		
	4 2 4 3 7 1 8	01/06/81	Murai et al.		
	4 3 1 5 9 7 0	02/16/82	McGee		
	4 4 0 1 5 0 0	08/30/83	Hamada et al.		
	4 4 0 9 2 6 6	10/11/83	Wieczorrek et al.		
	4 4 4 1 9 4 6	04/10/84	Sharma		
	4 4 5 7 9 7 0	07/03/84	Das et al.		
	4 4 6 1 8 6 7	07/24/84	Surprenant		
	4 4 8 9 1 9 1	12/18/84	Chung, deceased		
	4 5 3 4 8 1 5	08/13/85	Hamada et al.		
	4 6 1 8 3 8 9	10/21/86	Agodoa		
	4 6 8 1 6 3 6	07/21/87	Saito et al.		

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	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS
✓	3 4 4 3 9 2 6A1	06/12/86	Germany		
✓	53 3 0 7 6	02/02/78	Japan		
✓	56 1 6 1 4 7 5	12/11/81	Japan		
✓	58 5 2 0 3 6	11/19/81	Japan		
✓	60 2 0 8 4 8 0	10/21/85	Japan		
✓	60 8 1 2 5 6	05/09/85	Japan		

OTHER ART (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

✓	Luginsland, H. D., Reactivity of the Sulfur Functions of the Disulfane Silane TESPd and the Tetrasulfane Silane TESPT, presented at a meeting of the Rubber Division, American Chemical Society, Chicago, Illinois (April 13-16, 1999)
✓	Plueddemann, Edwin P., Silane primers for epoxy adhesives, <i>J. Adhesion Sci. Technol.</i> , Vol. 2, No. 3, pp. 179-188 (1988)
✓	Plueddemann, Edwin P., Reminiscing on Silane Coupling Agents, <i>J. Adhesion Sci. Technol.</i> Vol. 5, No. 4, pp. 261-277 (1991)
✓	Plueddemann, Edwin P., et al. Adhesion Enhancing Additives for Silane Coupling Agents, 42nd Annual Conference, Composites Institute, The Society of the Plastics Industry, Inc., (February 2-6, 1987)

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	4 7 1 9 2 6 2	01/12/88	Plueddemann		
	4 8 6 3 7 9 4	09/05/89	Fujii et al.		
	5 0 5 1 1 2 9	09/24/91	Cuthbert et al.		
	5 0 7 3 1 9 5	12/17/91	Cuthbert et al.		
	5 0 7 3 4 5 6	12/17/91	Palladino		
	5 1 0 8 7 9 3	04/28/92	van Ooij et al.		
	5 2 0 3 9 7 5	04/20/93	Richardson		
	5 2 1 7 7 5 1	06/08/93	King et al.		
	5 2 2 1 3 7 1	06/22/93	Miller		
	5 2 9 2 5 4 9	03/08/94	van Ooij et al.		

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	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS
✓	60 2 1 3 9 0 2	10/25/85	Japan		
✓	62 7 5 3 8	01/14/87	Japan		
✓	62 5 7 4 7 0	03/13/87	Japan		
✓	63 3 4 7 9 3	07/12/88	Japan		
✓	63 9 7 2 6 6	04/27/88	Japan		
✓	63 9 7 2 6 7	04/27/88	Japan		

OTHER ART (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

✓	Pu, Z., et al., Hydrolysis Kinetics and Stability of Bis (Triethoxysilyl) Ethane in Water-Ethanol Solution by FTIR Spectroscopy, <i>Journal of Adhesion Science and Technology</i> (1996)
✓	Sabata, A., et al., Trends toward a better understanding of the interface in painted metals, <i>Trends in Corrosion Research</i> , 1, pp. 181-193 (1993)
✓	Sabata, A., et al., The interphase in painted metals pretreated by functional silanes, <i>J. Adhesion Sci. Technol.</i> , Vol. 7, No. 11, pp. 1153-1170 (1993)
✓	Sabata, A. Et al., TOFSIMS Studies of Cleaning Procedures and Silane Surface Treatments of Steels, <i>Journal of Testing and Evaluation</i> , JTRVA, Vol. 23, No. 2, pp. 119-125 (March 1995)

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	5 3 2 2 7 1 3	06/21/94	van Ooij et al.		
	5 3 2 6 5 9 4	07/05/94	Sabata et al.		
	R E 3 4 6 7 5	07/26/94	Plueddemann deceased		
	5 3 6 3 9 9 4	11/15/94	Angeline		
	5 3 8 9 4 0 5	02/14/95	Purnell et al.		
	5 3 9 3 3 5 3	02/28/95	Bishop		
	5 4 0 5 9 8 5	04/11/95	Parker et al.		
	5 4 1 2 0 1 1	05/02/95	Morris et al.		
	5 4 3 3 9 7 6	07/18/95	van Ooij et al.		
	5 4 5 5 0 8 0	10/03/95	van Ooij et al.		
	5 4 6 6 8 4 8	11/14/95	Childress		
	5 4 6 8 8 9 3	11/21/95	Parker et al.		

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✓	5 3 3 2 7 5	05/19/93	Japan		
✓	6 1 8 4 7 9 2	07/05/94	Japan		
✓	WO 98 3 0 7 3 5	07/16/98	PCT		
✓	WO 99 2 0 6 8 2	04/29/99	PCT		
✓	WO 99 2 0 7 0 -5-	04/29/99	PCT		

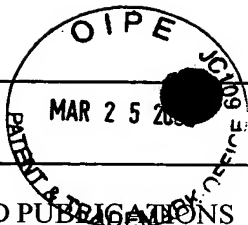
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✓	van Ooij, W. J., et al. Characterization of Films of Organofunctional Silanes by ToF-SIMS, <i>Surface and Interface Analysis</i> , Vol. 20, pp.475-484 (1993)
✓	van Ooij, W. J., et al. Modifications of the Interface Between Paints and Stainless Steels by Means of an Interphase Crosslinked Organofunctional, <i>Materials Research Society Symposium Proceedings</i> , Vol. 304, pp. 155-160, (1993)
✓	van Ooij, W. J., et al. Novel Silane-Based Pretreatments of Metals to Replace Chromate and Phosphate Treatment, <i>2nd Annual Advanced Techniques for Replacing Chromium: An Information Exchange</i> , prepared by David S. Vizslay, Concurrent Technologies Corp. NDCEE, Seven Springs Mountain Resort, Champion, PA (November 7-8, 1995) pp. 287-310
✓	van Ooij, W. J., et al. On the Use, Characterization and Performance of Silane Coupling Agents Between Organic Coatings and Metallic or Ceramic Substrates, <i>American Institute of Physics</i> , pp. 305-321 (1996)
✓	van Ooij, W. J., et al., Silane-Based Pretreatments of Al and its Alloys as Chromate Alternatives, <i>Aluminium Surface Science Technology</i> , "Elzenveld" Antwerp-Belgium, (May 12-15, 1997)

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	5 5 2 0 7 6 8	05/28/96	Crook et al.		
	5 6 0 3 8 1 8	02/18/97	Brent et al.		
	5 6 2 2 7 8 2	04/22/97	Poutasse, III et al.		
	5 6 6 0 8 8 4	08/26/97	Crook et al.		
	5 6 3 3 0 3 8	05/27/97	Ruschau		
	5 6 3 9 5 5 5	06/17/97	Bishop		
	5 7 0 0 5 2 3	12/23/97	Petrole et al.		
	5 7 5 0 1 9 7	05/12/98	van Ooij et al.		
	5 7 5 9 6 2 9	06/02/98	van Ooij et al.		
	5 7 8 9 0 8 0	08/04/98	Grimberg et al.		
	5 8 5 1 3 7 1	12/22/98	Steinbrecher et al.		
	5 9 0 7 0 1 5	05/25/99	Sexsmith		

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS
✓ WO 99 6 7 4 4 4	29 Dec 1999	PCT		
✓ WO 00 3 8 8 4 4	6 July 2000	PCT		

OTHER ART (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

✓	van Ooij, W. J. et al., Silane Coupling Agent Treatments of Metals for Corrosion Protection , Presented at the Fourth Interantional Forum and business Development Conference on Surface Modification, Couplants and Adhesion Promoters, Adhesion Coupling Agent Technology 97, Boston, MA (September 22-24, 1997)
✓	van Ooij, W. J., et al., Pretreatment of Metals for Painting by Organofunctional Silanes , Extended Abstract of Paper Presented at 1997 International Symposium on Advances in Corrosion Protection by Organic Coatings, Noda, Japan (October 29-31, 1997)
⊗	van Ooij, W. J., et al., Rubber to Metal Bonding , Presented at the International Conference on Rubbers, Calcutta, India (December 12-14, 1997)
✓	van Ooij, W. J., et al., Bonding Rubber to Metals by Silanes , Presented at Rubber Division, American Chemical Society 155th Technical Meeting, Chicago, IL. (April 13-16, 1999)
✓	Walker, P., Organosilanes as adhesion promoters , <i>J. Adhesion Sci. Technol.</i> Vol 5, No. 4, pp. 279-305 (1991)
⊗	Wu, G. L. Et al. Alcoholysis of Chlorosilanes and the Synthesis of Silance Coupling Agents , Inst. Chem., Adad. Sin., Peking, People Rep. China, Hua Hsueh Hsueh Pao (1980) (Abstact Only)
✓	Yuan, W., et al., Characterization of Organofunctional Silane Films on Zinc Substrates , Submitted to <i>Journal of Colloid and Interface Science</i> , (August 30, 1996)
✓	Zhang, B. C., et al., Charterization of Silane Films Deposited on Iron Surfaces , Submitted to <i>Langmuir</i> , First Revision, (May 3, 1996)

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	6 0 5 7 0 4 0	05/02/00	Hage		
	6 0 7 1 5 6 6	06/06/00	Brown et al.		
	6 1 3 2 8 0 8	10/17/00	Brown et al.		

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	Abstract of Japanese patent number 62-79732 (10/04/94)
	Abstract of Japanese patent number 41-6174 (04/08/92)
	Abstract of Japanese patent number 62-216727 (09/24/87)
	Abstract of Japanese patent number 40-46932 (02/17/92)
	Comyn, J., et al., An examination of the interaction of silanes containing carbon-carbon double bonds with aluminum oxide by inelastic electron tunneling spectroscopy, <i>Int. J. Adhesion</i> (1990), 10(1), 13-18 (abstract only)
	Kurth, D.G., et al., Monomolecular layers and thin films of silane coupling agents by vapor-phase adsorption on oxidized aluminum, <i>J. Phys. Chem</i> (1992), 96(16), 6707-12 (abstract only)
	van Ooij, W. J., Silane-based Metal Pretreatments to Replace Phosphates and Chromates; copy of overhead slides presented at the 3rd Annual Advanced Techniques for Replacing Chromium: An Information Exchange and Technology Demonstration, November 4-6, 1996
	Abstract of Japanese patent number 59-185779 (10/22/84)
	Abstract of Japanese patent number 07-329104 (12/19/95)
	Abstract of Japanese patent number 62-83034 (04/16/87)
	Abstract of Japanese patent number 53-232 (01/05/78)

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